CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 97-072
UPDATED WASTE DISCHARGE REQUIREMENTS AND
RECISION OF WDR N0. 85-083 FOR:

South Napa Waste Management Authority
American Canyon Class III Landfill,
Napa County

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

SITE OWNER AND LOCATION

1. The South Napa Waste Management Authority (hereinafter referred to as the discharger) is the legal owner and operator of the American Canyon Sanitary Landfill (American Canyon LF). The site is located along the east bank of the Napa River in Napa County (Figure 1). The discharger owns 122 acres at this location, of which the landfill occupies approximately 97 acres.

PURPOSE OF UPDATE ORDER

2. The primary objectives of this order are to: 1) Establish closure and postclosure requirements for the facil 2) Revise the groundwater, surface water and leachate monitoring programs to evaluate the impact to wat quality; and 3) Update the Waste Discharge Requirements and bring the site into compliance with Chapt 15, Title 23 of the California Code of Regulations (CCR) and Part 268 (Subtitle D), Title 40 of the Code Federal Regulations (CFR).

SITE DESCRIPTION AND HISTORY

3. The American Canyon LF is an unlined, Class III landfill sited on bay muds and comprised of two p as shown in Figure 1. Phase I occupies 63.8 acres and final cover construction on this portion begar September 1996. The Final Closure Plan for Phase I was submitted by the discharger and approved Phase II is approximately 33 acres with closure tentatively set for 2000. The American Canyon LF receiving waste in 1942 and was operated as a burn site until 1957, when modified opening burnin implemented. All waste burning operations were discontinued in 1971. American Canyon Devel Company owned the American Canyon LF from its opening until 1993, when ownership was tran the South Napa Waste Management Authority. The Waste Authority represents Napa County an of Napa and Vallejo (EMCON, 1996a).

4. The Regional Board adopted Waste Discharge Requirements (WDR) for the American Canyon LF on September 18, 1979 and amended this Order in November 1981. The updated Order was issued with the adoption of Order No. 85-083, issued June 19, 1985. This Order rescinds Order No. 85-083.

WASTES AND THEIR CLASSIFICATION

5. Wastes disposed of at the American Canyon LF are comprised primarily of non-hazardous municipal solid waste, including household wastes, construction and demolition wastes, and solid industrial debris. The landfill no longer receives waste on a regular basis, but remains open for disposal of inert wastes, rock, and soil, and accepts the waste types detailed above on an emergency basis only. The American Canyon LF is also approved to receive specified petroleum contaminated soils. The landfill will continue to receive limited waste until 2000, at which point the unit will contain approximately 4.8 million cubic yards of waste. Presently, there are approximately 200,000 cubic yards of landfill capacity remaining.

6. In March 1996, Regional Board staff approved a plan submitted by the discharger for the acceptance of specified non-hazardous contaminated soils. The plan and approval detail disposal requirements for petroleum contaminated soils including sampling frequencies, waste source information and documentation, laboratory analyses, waste acceptance methodology, and landfill placement guidelines.

GEOLOGY

7. **Setting** - The American Canyon LF is located in the Coast Range geomorphic province, north of San Pablo Bay. The landfill is situated in the alluvial flood plain of the Napa River. The site is bounded along the west margin by the river and surrounded on the remaining three sides by sloughs and drainages.

8. **Stratigraphy** - Sediments beneath the American Canyon LF are comprised predominantly of unconsolidated, fine-grained silts and clays (bay muds) with infrequent lenticular, fine sand interbeds. The lenticular sand interbeds generally have a north-south orientation and are more frequent beneath the eastern portion of the site (EMCON, 1992).

9. **Structure** - The West Napa Fault is located approximately 1 mile east of the American Canyon LF, and is the closest Holocene fault (EMCON, 1991). The Green Valley Fault zone is located approximately 7.5 miles east of the site. No known Holocene faults exist at the site.

SURFACE WATER AND GROUNDWATER

10. **Surface water** - Surface water in the area surrounding the site drains via channels to the adjacent Napa River, and flow in these channels is generally intermittent. The Napa River at this location is generally brackish due to the significant influence of tidal surges from the San Pablo Bay to the south.

11. **Groundwater** - Groundwater beneath the American Canyon LF is first encountered in the younger bay muds at depths ranging from 4 to 8 feet, based on monitoring well and groundwater data. Because of the limited areal extent of any sand units and the low permeability of Bay Muds, groundwater velocities and corresponding well yields tend to be very low in the upper bay muds. Water quality in these stratigraphic units is generally brackish with elevated total dissolved solids. The groundwater gradient at the site is generally eastward, indicative of recharge from the Napa River.

12. **Groundwater Monitoring** - The uppermost groundwater in the younger bay muds is monitored at the American Canyon LF with 12 monitoring wells. Quarterly monitoring samples are analyzed from each well for general monitoring parameters that include volatile organic compounds (VOCs), arsenic, chromium, electrical conductivity (EC), and pH. A more extensive list of compounds, the Constituents of Concern (COCs), is analyzed for once every five years; the next COC monitoring event is scheduled for 2001.

13. **Groundwater Separation** - Due to the shallow, first-encountered groundwater, the site does not meet the requirement for a minimum 5-foot separation between waste and groundwater as specified in Section 2530(c) of Chapter 15. The landfill was constructed prior to the promulgation of these requirements.

14. **Groundwater Degradation** - The most recent Quarterly Self Monitoring Report for the American Canyon LF indicates that groundwater degradation has occurred in two of the upgradient wells. Benzene in both wells has been detected on several monitoring events in the range of 1 to 2.5 ug/L. Additionally, toluene (0.15 to 3 ug/L), total xylenes (1 to 8.6 ug/L), chlorobenzene (8 to 11 ug/L), and other VOCs (including 1,1,1-TCA) have been detected at concentrations from 1 to 2 ug/L. Detections of similar compounds and concentrations have occurred consistently at one downgradient well and sporadically with lower concentrations at other downgradient well locations.

15. **Basin Plan** - The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin (Basin Plan) in June 21, 1995 This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resource Control Board and the Office of the Administrative Law on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

16. **Beneficial Uses** - Beneficial uses of the shallow groundwater is generally to recharge surface water near the site, the Napa River, and the San Pablo Bay. The beneficial uses of the lower Napa River and San Pablo Bay include:
    a. Commercial and sport fishing;
    b. Estaurine habitat;
    c. Industrial service supply;
    d. Fish migration;
    e. Navigation;

f. Preservation of rare and endangered species;
g. Water contact recreation;
h. Non-contact water recreation;
i. Shellfish harvesting;
j. Fish spawning; and
k. Wildlife Habitat.

DESIGN OF WASTE MANAGEMENT UNIT

17. The American Canyon LF is unlined, but the underlying bay muds exhibit very low permeabilities, generally ranging from 1×10^{-6} to 1×10^{-7} cm/sec. The final cover for the landfill is being constructed in a two phase approach. Phase I final cover construction began in 1996 and will close the northern two-thirds (63.8 acres) of the landfill. The estimated completion time for this phase of construction is Fall, 1997. The closure plan for the Phase I portion was approved by Board staff in 1996 (EMCON, 1996a). Phase II of closure construction will cover the southern third (33.2 acres) of the landfill and construction is estimated for completion during the 2001 construction season, based on present disposal rates. The final cover in Phases I includes: a 2-foot foundation layer overlying compacted waste; a 1-foot thick, low-permeability clay cover placed above the foundation layer; and a vegetative/protective soil layer overlying the clay cover. The Phase II final cover, as presently designed, will mirror the Phase I portion although final closure design reports will not be submitted until closer to the closure date.

MONITORING PROGRAMS

18. **Groundwater Monitoring** - Historic groundwater monitoring has occurred quarterly at 12 monitoring wells, all screened in the uppermost water bearing zone of the younger bay muds. The updated groundwater program is detailed in the Discharge Monitoring Plan attached to this Order (Attachment A).

19. **Leachate Monitoring** - Leachate at this facility is not presently monitored beyond measuring leachate elevations in landfill wells. Some historic monitoring has been performed and an extensive evaluation of leachate volumes in the landfill was completed in 1992 (EMCON, 1992). The updated leachate program is detailed in the Discharge Monitoring Plan attached to this Order (Attachment A).

20. **Surface water monitoring** - Surface water monitoring is currently conducted quarterly at one upgradient and one downgradient monitoring location in the perimeter drainage along the eastern perimeter of the landfill. The updated surface water monitoring program is detailed in the Discharge Monitoring Program attached to this Order (Attachment A).

21. **Vadose Zone Monitoring** - Vadose zone monitoring as required by Article 5, Section 2550.7 (Chapter 15, CCR) is not technically feasible as there is essentially no vadose zone at this site.

22. The discharger is required to analyze for the monitoring parameters as presented in Table A-1 of the attached Discharge Monitoring Program attached to this Order (Attachment A).

CALIFORNIA ENVIRONMENTAL QUALITY ACT

23. This action is exempted from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15301, Title 14 of the California Code of Regulations.

24. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharger and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

25. The Board, in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the South Napa Waste Management Authority, its agents, successors and assigns shall meet the applicable provisions contained in Title 23, Division 3, Chapter 15 of the California Code of Regulations and Division 7 of the California Water Code and shall comply with the following:

A. PROHIBITIONS

1. Waste shall not be in contact with ponded water from any source whatsoever.

2. Following final closure of Phase II, no additional waste shall be deposited or stored at this site.

3. Leachate from waste and ponded water containing leachate or in contact with solid wastes shall not be discharged to waters of the State or of the United States.

4. Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). (H & SC Section 5411, CWC Section 13263)

5. The discharger, or any future owner or operator of the site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:

    a. Surface Waters
        1. Floating, suspended, or deposited macroscopic particulate matter or foam;
        2. Bottom deposits or aquatic growths;
        3. Alteration of temperature, turbidity, or apparent color beyond natural background levels;

4. Visible, floating, suspended or deposited oil or other products of petroleum origin; and
5. Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

b. Groundwater

1. Groundwater shall not be impacted as a result of solid waste degradation.

B. SPECIFICATIONS

1. All reports pursuant to this order shall be prepared under the supervision of a registered civil engineer, California registered geologist or certified engineering geologist.

2. The site shall be protected from any washout or erosion of wastes or covering material and from inundation which could occur as a result of a 100 year 24 hour precipitation event, or as the result of flooding with a return frequency of 100 years.

3. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes during the life of the site.

4. The existing containment, drainage, and monitoring systems at the facility, shall be maintained as long as leachate is present and poses a threat to water quality.

5. The discharger shall assure that the foundation of the site, the solid waste fill, and the structures which control leachate, surface drainage, erosion and gas are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

6. The final cover system shall be graded and maintained to promote lateral runoff and prevent ponding and infiltration of water.

7. The discharger shall analyze the samples from the existing groundwater wells as outlined in the Discharge Monitoring Program (Attachment A).

8. In the event of a release of a constituent of concern beyond the Point of Compliance (2550.5), the site begins a Compliance Period (Sect. 2550.6(a)). During the Compliance Period, the discharger shall perform an Assessment Monitoring Program and a Corrective Action Program. The Point of Compliance is defined as the vertical surface located along the outer edge of the waste management unit and extending through the uppermost aquifer underlying the unit.

9. The discharger shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any future Discharge Monitoring Program issued by the Executive Officer.

10. Landfill gases shall be adequately vented, removed from the landfill, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water.

11. The discharger shall maintain all devices or designed features installed in accordance with this order, such that they continue to operate as intended without interruption as provided for by the performance standards adopted by the California Integrated Waste Management Board.

12. The discharger shall provide a minimum of two surveyed permanent monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the operation and post-closure maintenance period. These monuments shall be installed by a licensed land surveyor or registered civil engineer.

13. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure which threatens the integrity of containment features or the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

14. The discharger shall comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.

15. The discharger shall maintain the facility so as to prevent a statistically significant increase in water quality parameters at points of compliance as provided in Section 2550.5.

C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer.

2. The discharger must comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350).

3. The discharger shall submit annual monitoring reports by January 31 of each year in accordance with the attached Updated Discharge Monitoring Program (Attachment A). Sample collection shall be conducted at locations and frequencies specified in the Updated Discharge Monitoring Plan. The discharger shall also submit an annual report to the Board covering the previous calendar year as described in Part A of the Updated Discharge Monitoring Program. In addition to the requirements outlined in Attachment A, this report shall also include the following: location and operational condition of all leachate and groundwater monitoring wells; groundwater and leachate contours for each monitoring event; tabulation of monthly leachate volumes discharged to the wastewater district along with tabulated analytical results for these discharges; the existing gas extraction system (annual report only); and gas monitoring results (annual report only).

REPORT DUE DATE: ANNUAL REPORT - JANUARY 31 (OF EACH YEAR)

4. The discharger shall submit **Final Cover As-built Construction Report** acceptable to the Executive Officer, for each phase of landfill closure construction. This report will include as-built drawings, construction quality assurance results with a written summary and all test results and certification by the professional engineer or certified engineering geologist. The report shall also include update topographic maps of the facility.

REPORT DUE DATE: 45 days following completion of each phase of Final Cover Construction

5. The discharger shall submit a **Final Cover Construction Plan** which shall include, but is not limited to, the following: a schedule for completion of all construction field activities; CQA testing frequencies for in-place soils and any borrow materials; waste consolidation plans and associated post-removal analyses; final cover design drawings; details of landfill gas and leachate well contingencies during cover construction; proposed final gas and leachate well configuration with system changes.

PLAN DUE DATE: 180 days prior to anticipated receipt of last waste

6. The discharger shall submit a detailed **Post Earthquake Inspection and Corrective Action Plan** acceptable to the Executive officer to be implemented in the event of any earthquake generating ground shaking of Richter Magnitude 6 or greater at or within 30 miles of the landfill. The report shall describe the containment features, and groundwater monitoring and leachate control facilities potentially impacted by the static and seismic deformations of the landfill. The plan shall provide for reporting results of the post earthquake inspection to the Board within 72 hours of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the landfill structures, the corrective action plan shall be implemented and this Board shall be notified of any damage.

REPORT DUE DATE: OCTOBER 22, 1997

7. The discharger shall submit a **Final Leachate Discharge System Plan** acceptable to the Executive Officer. This plan shall include final design drawings for a leachate discharge system or treatment facility, and a construction schedule (tied to calendar dates) for installation.

PLAN DUE DATE: MARCH 18, 1998

8. The discharger shall submit a **Groundwater Impact Evaluation**. This report shall include: discussion of cause/source and extent; tabulation and evaluation of historic groundwater analytical data, evaluation, and any planned future investigations into continued impacts to groundwater in upgradient monitoring wells G-3A and G-8 and monitoring wells G-1 and G-10.

REPORT DUE DATE: OCTOBER 22, 1997

9. The discharger shall submit a **Leachate Monitoring System Evaluation**. This plan shall include discussion and evaluation of leachate monitoring wells, collection sumps, effectiveness of the leachate removal system, leachate contour levels (in the form of contour maps) as measured during the quarterly monitoring events, and an evaluation of the overall effectiveness of the leachate removal system in reducing leachate volumes within the landfill. Following the initial submittal, this discussion and evaluation will be performed on a yearly basis and included with the annual monitoring report.

REPORT DUE DATE: JANUARY 31 each year thereafter

10. The discharger shall submit a letter report to the Board detailing the repair and maintenance activities that need to be completed prior to the commencement of the following rainy season. This letter report shall also include a schedule for repair and maintenance activities, and cost analysis detailing the anticipated expense for all repairs, maintenance, and monitoring during the next 12 months. Repair and maintenance estimates shall be based on rainy season inspections conducted throughout the winter as required in the Discharge Monitoring Plan (Attachment A).

REPORT DUE DATE: AUGUST 1, 1997 and JUNE 1 each year thereafter

11. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.

12. The discharger shall submit a **Contingency Plan** to be instituted in the event of a surface leak or spill from the leachate facilities. The discharger shall give immediate notification to the San Francisco Bay Regional Water Quality Control Board and the Local Enforcement Agency (LEA). The

discharger shall initiate its contingency action plan to stop and contain the migration of pollutants to receiving waters.

REPORT DUE DATE: DECEMBER 19, 1997

13. The discharger shall file with the Regional Board Discharge Monitoring Reports performed according to any Discharge Monitoring Program issued by the Executive Officer.

14. The discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

REPORT DUE DATE: IMMEDIATE

15. The discharger shall maintain a copy of these waste discharge requirements and these requirements shall be available to operating personnel at the facility at all times (CWC Section 13263).

16. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of the waste discharged or related operations.

17. In the event that the discharger-owned property adjacent to the landfill is developed into residential dwellings, the discharger will notify perspective home purchasers of the presence of the landfill.

18. The discharger shall permit the Regional Board or its authorized representative, upon presentation of credentials:

    a. Immediate entry upon the premises on which wastes are located or in which any required records are kept.
    b. Access to copy any records required to be kept under the terms and conditions of this order.
    c. Inspection of any treatment equipment, monitoring equipment, or monitoring methods required by this order or by any other California State Agency.
    d. Sampling of any discharge or groundwater governed by this order.

19. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes.

20. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this

office. The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgment that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on (CWC Sections 13267 and 13263). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contact with the Board and statement. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

21. This Order is subject to Board review and updating, as necessary, to comply with changing State and Federal laws, regulations, policies, or guidelines; changes in the Board's Basin Plan; or changes in the discharge characteristics (CWC Section 13263).

22. Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information (CWC Sections 13260 and 13267).

23. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge [CWC Section 13263(g)].

24. Provisions of these waste discharge requirements are severable. If any provision of these requirements are found invalid, the remainder of these requirements shall not be affected.

25. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this order [CWC Section 13263(f)].

26. Reporting of Hazardous Substance Release: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Regional Board by calling (510) 286-1255 during regular office hours (Monday through Friday, 8:00 to 5:00). A written report

shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified. This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

27. The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the Executive officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours [CWC Sections 13263 and 13267].

28. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Officer a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

29. Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR, Part 1360) promulgated by the U.S. Environmental Protection Agency (CCR Title 23, Section 2230).

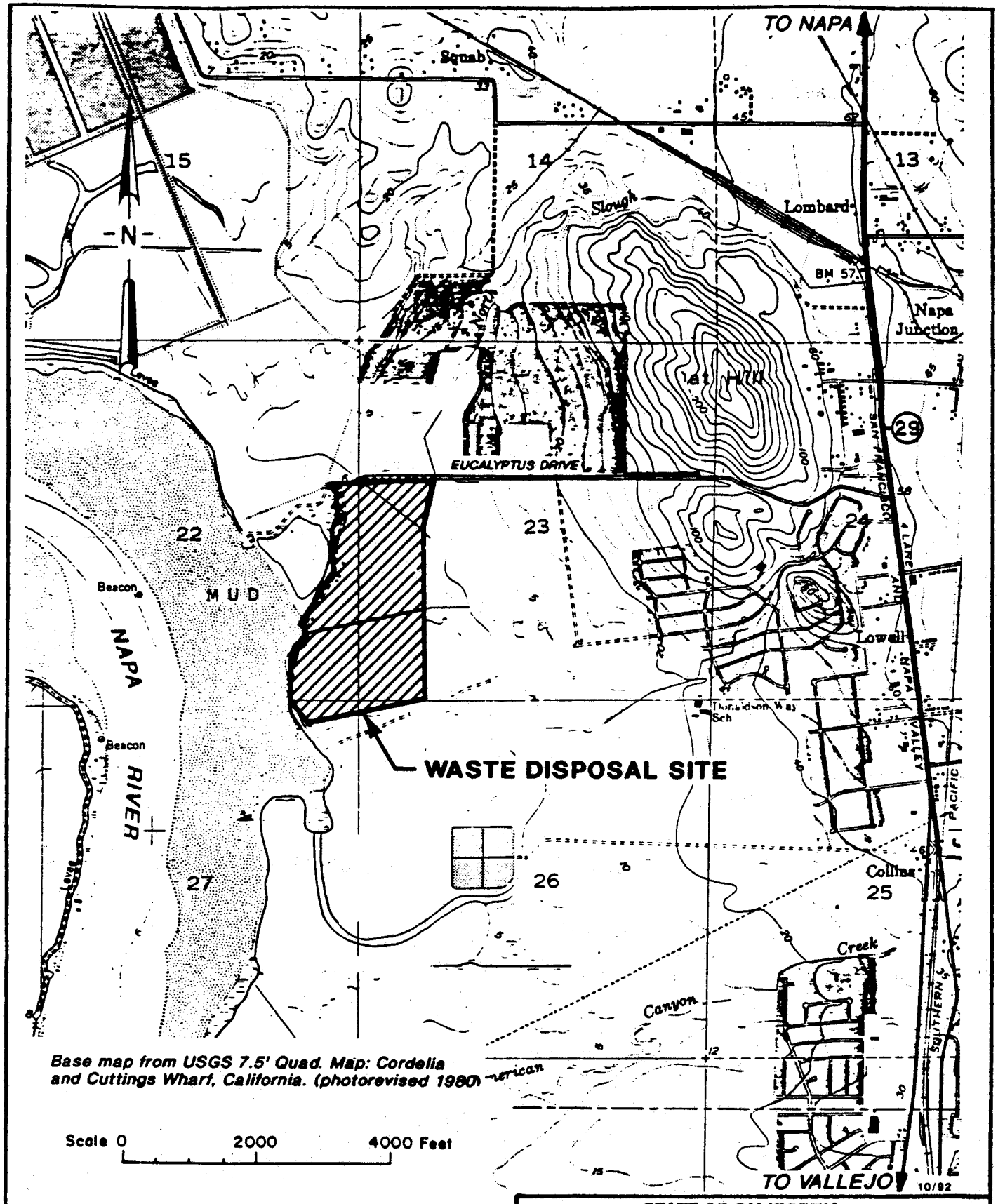
30. This Board's Order No. 85-083 is hereby rescinded.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on June 18, 1997.

Loretta K. Barsamian
Executive Officer

Figures: Figure 1 - Site Location Map
Figure 2 - Facility Map

Attachment: Attachment A - Discharge Monitoring Program



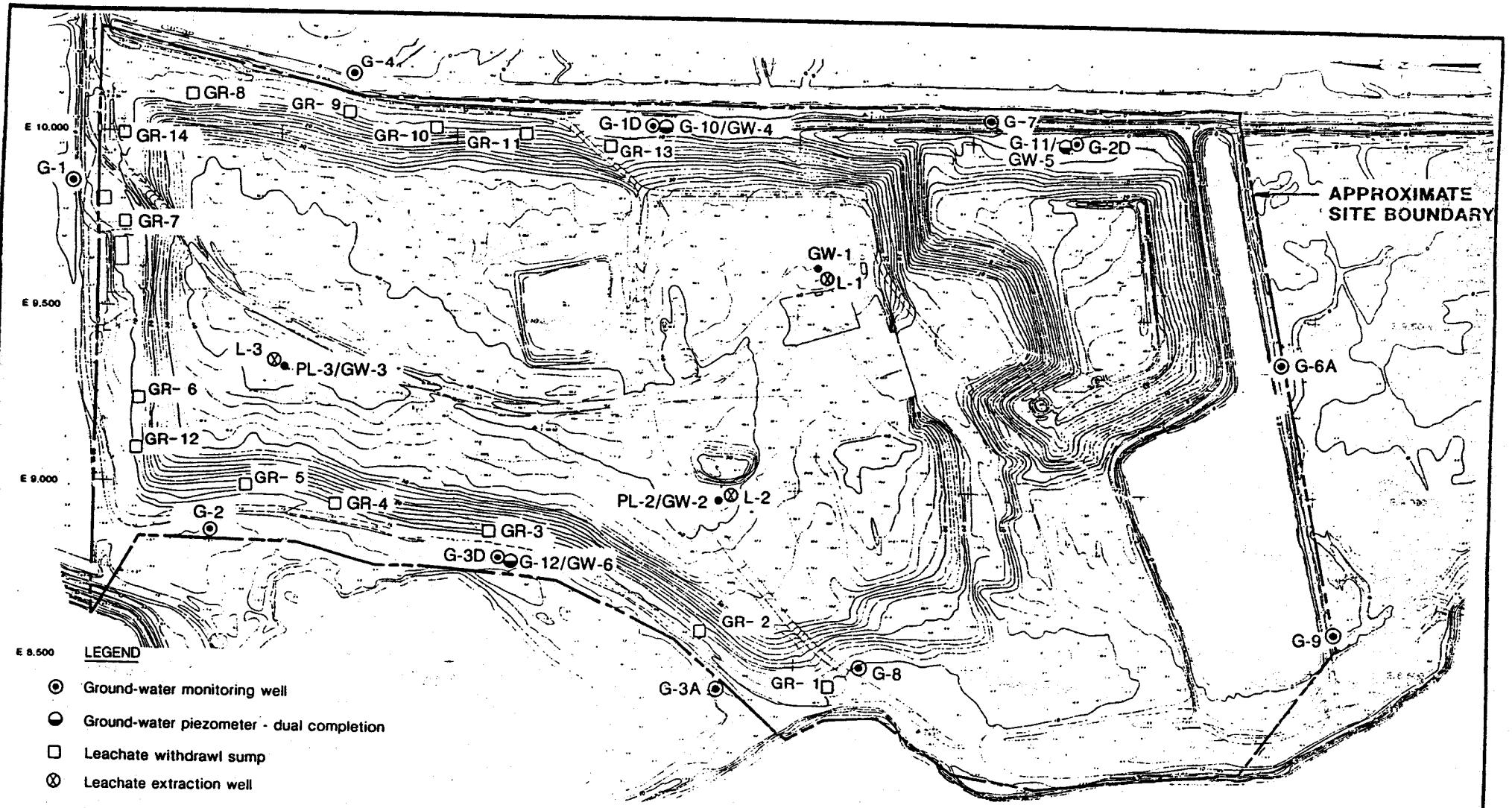
Base map from USGS 7.5' Quad. Map: Cordelia and Cuttings Wharf, California. (photorevised 1980)

Scale 0 2000 4000 Feet

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Figure 1
Site Location Map
American Canyon Class III Landfill
Napa County

DRAWN BY:	DATE:	DRWG. NO.



STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

Figure 2
Facility Map
American Canyon Class III Landfill
Napa County

DRAWN BY:	DATE:	DRWG. NO.

REFERENCES

EMCON, 1996a, Partial Final Closure and Postclosure Maintenance Plan, American Canyon Sanitary Landfill.

EMCON, 1996b, Fourth Quarter Monitoring Report, American Canyon Sanitary Landfill.

EMCON, 1992, Determination of Leachate Quantity, American Canyon Sanitary Landfill.

EMCON, 1991, Report of Disposal Site Information, American Canyon Sanitary Landfill.

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

UPDATED
DISCHARGE MONITORING PROGRAM

FOR

AMERICAN CANYON LANDFILL
CLASS III SOLID WASTE DISPOSAL SITE
NAPA COUNTY

ORDER NO. 97-072

CONSISTS OF

PART A

AND

PART B

PART A

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's (Board) Resolution No.73-16. This Discharge Monitoring Program is issued in accordance with Chapter 15, Article 5 (CCR).

The principal purposes of a Discharge Monitoring Program are: (1) to document compliance with waste discharge requirements and prohibitions established by the Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of standards of performance, and toxicity standards, (4) to assist the discharger in complying with the requirements of Article 5, Chapter 15 as revised July 1, 1991.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.

2. Receiving waters refers to any surface water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill areas, the surface runoff from the site, and surface waters surrounding the site, are considered receiving waters.

3. Standard observations refer to:

a. Receiving Waters:

1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;
2) Discoloration and turbidity: description of color, source, and size of affected area;
3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source;
4) Evidence of beneficial use: presence of water-associated wildlife;
5) Flow rate; and
6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

b. Perimeter of the waste management unit.

1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate (Show affected area on map);
2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source; and
3) Evidence of erosion and/or daylighted refuse;

c. The waste management unit.

1) Evidence of ponded water at any point on the waste management facility;
2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source;
3) Evidence of erosion and/or daylighted refuse; and
4) Standard Analysis (SA) and measurements are listed on Table A (attached).

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analyses, and observations in the following media:

1. Groundwater per Section 2550.7(b) and
2. Surface water per Section 2550.7(c)

and per the general requirements specified in Section 2550.7(e) of Article 5, Chapter 15. The Regional Board is requiring semi-annual sampling for this Discharge Monitoring Program.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any

unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and sample station number;
2. Date and time of sampling;
3. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
5. Calculation of results; and
6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written detection monitoring reports shall be filed by the 15th day of the month following the report period. In addition an annual report shall be filed as indicated in F.3 below. The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

b. Each monitoring report shall include a compliance evaluation summary. The summary shall contain:

1) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations;
2) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water; and

3) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations.

c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

d. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and approved by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that is less than 80%; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name and qualifications of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring or control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

f. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.

2. CONTINGENCY REPORTING

a. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days thereafter. This report shall contain the following information:

1) A map showing the location(s) of discharge;
2) Approximate flow rate;
3) Nature of effects; i.e. all pertinent observations and analyses; and
4) Corrective measures underway or proposed.

b. A report shall be made in writing to the Board within seven days of determining that a statistically significant difference occurred between a downgradient sample and California and Federal Drinking Water Standards (Maximum Contaminant Levels, MCLs) for appropriate constituents. Where not appropriate, intrawell comparison shall be used to evaluate if a statistically significant difference exists in groundwater quality at a given location. Notification shall indicate what detection limit(s) has/have been exceeded, where applicable. The discharger shall immediately resample at the compliance point where this difference has been found and re-analyze.

c. If resampling and analysis confirms the earlier finding of a statistically significant difference between monitoring results and the detection limit, the discharger must submit to the Board an amended Report of Waste Discharge as specified in Section 2550.8(k)(5) for establishment of an Evaluation Monitoring Program (EMP) meeting the requirements of Section 2550.9 of Chapter 15.

d. Within 180 days of determining statistically significant evidence of a release, submit to the Regional Board an engineering feasibility study for a Corrective Action Program (CAP) necessary to meet the requirements of Section 2550.10. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

3. REPORTING

By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. The annual report may incorporate the second semi-annual report of the previous year. The annual report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year; the report should be accompanied by a $3\frac{1}{2}$" computer data disk, MS-DOS ASCII format, tabulating the year's data;

b. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements;

c. A map showing the area, if any, in which filling has been completed during the previous calendar year;

d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater;

e. An evaluation of the effectiveness of the leachate monitoring/control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

4. WELL LOGS

A boring log and a monitoring well construction log shall be submitted for each new sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 30 days after well installation.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. ON-SITE OBSERVATIONS - **Observe Monthly, Report Quarterly**

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-`n'	Located on the waste disposal area as deli-neated by a 500 foot grid network.	Standard observations for the waste management unit.	Monthly
P-1 thru P-`n' (per-imeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter.	Monthly
L-1 thru L-'n'	At each point of discharge. Include a map indicating locations of discharge(s)	Standard test as outlined in on Table A-2. Grab sample taken from seeps with flow rates exceeding 2 gpm.	Semi-annual or each occurrence.

B. FACILITIES MONITORING - **Observe and report quarterly**

The Discharger shall inspect all facilities to ensure proper and safe operation once per quarter and report semi-annually. The facilities to be monitored shall include, but not be limited to:

a. Leachate collection and removal pumping and piping system;
b. Perimeter diversion channels;
c. Final and interim cover systems and run-on/run-off control features;
d. Landfill gas, groundwater and leachate monitoring and management systems.

C. SURFACE WATER, GROUNDWATER, LEACHATE, and SEEPAGE MONITORING - **Report Quarterly** - Surface water, groundwater, leachate, and seepage monitoring shall be conducted as outlined below and on Table A-2 (Attached). Monitoring locations are shown in Figure A-1. Constituent of Concern (COC) monitoring was conducted during the first quarter 1996 and shall be repeated during the first quarter every five years beginning 2001.

D.

Table A-1
Monitoring Points

Media	Sample Point	Frequency	Analysis
Groundwater	G-8[1], G-3A[1]	Quarterly[1]	SVOC[1], Table A-2, WL
Groundwater	G-1, G-2, G-2D, G-4, G-6AR, G-7, G-9, G-10, G-11, GW-4, GW-6	Quarterly	Table A-2, WL
Surface Water	S-1[2], S-2[2]	Quarterly[2]	SVOC[2], Table A-2
Leachate	L-1[3], PL-2[3]	Semi-annual[3]	SVOC, Table A-2
Leachate	All Leachate Wells	Quarterly	WL
Seeps	At seep source	At time of discovery	Table A-2, SVOC

Notes:

1 G-3A and G-8 will be sampled and analyzed for SVOCs on a semi-annual basis for the first two years only. Wells with SVOC detections will continue semi-annual monitoring.

2 Surface water samples will be analyzed for SVOCs on a semi-annual basis (first and third quarters) for the first two years, then only during events in which VOCs are detected.

SVOC Semivolatiles by EPA Method 8270

WL Water level/leachate level measurement and thickness of any free phase liquid for this location

3 L-1 and PL-2 will be sampled and analyzed semi-annually for first two years only. Provide results in corresponding quarterly report.

D. MONITORING REPORT REQUIREMENTS - **Included with quarterly report**

The following shall be included with quarterly monitoring reports in addition to components specified in other portions of this order.

a. Report all analytical data (no data truncation or filtering) in tabular format for all monitoring;
b. Provide explanation for disparate, erratic, or elevated detection limits;
c. Evaluation of leachate removal systems effectiveness;
d. Tabulate volumes and peak concentrations for non-hazardous petroleum contaminated soil received during each reporting period; and

e. Tabulate and report monthly leachate discharge volumes and laboratory analytical results for all discharges to the wastewater treatment plant.

f. Description of trend analysis method used for well analytical data evaluation, currently intrawell methods are used.

Table A-2
Analytical Monitoring Parameters

Analytical Parameter	EPA Method
Organics	
VOC[1]	8260
Metals	
Arsenic[2]	7060
Cadmium[2]	6010
Chromium[2]	6010
Copper[2]	6010
Lead[2]	7421
Nickel[2]	6010
General Chemistry	
PH	Field
Total Dissolved Solids	160.1
Electrical Conductivity	Field

Notes:

1 Include MTBE as specified analyte within Method 8260
2 Dissolved metals

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 97-072.

2. Is effective on the date shown below.

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.

Loretta K. Barsamian
Executive Officer

Date Ordered: June 18, 1997

Attachment: Figure A - Well Location Map